

Manual
Policies and Procedures
Bridge Engineering Assistance Program
BEAP



Missouri Department of Transportation

Bridge Unit

Rev. 06/30/03

BRIDGE ENGINEERING ASSISTANCE PROGRAM (BEAP)

This program is in place whereby local public agencies can receive engineering assistance through the Bridge Engineering Assistance Program (BEAP).

The scope of services are as follows:

The Purpose

The hydraulic and structural adequacy of the bridges on their street, road, and highway system is a major concern to the local public agencies of Missouri. Local public entities need to conduct effective bridge evaluations to determine priorities for maintenance, rehabilitation, and replacements. Many of these local agencies and their political subdivisions have neither the funds nor the engineering expertise necessary to conduct effective bridge evaluations or determine bridge maintenance and repair priorities.

As a result, the Missouri Highway and Transportation Commission has developed the BRIDGE ENGINEERING ASSISTANCE PROGRAM to provide Missouri local public agencies with the assistance necessary to study bridge engineering problems.

The services of this program are to be used for bridges which are located on public roads under the jurisdiction of local public agencies which are located off of the State System. These services are intended to be available to attack definite operational or structural problems presently being experienced on an existing bridge, and are not intended to be used for the development of detailed plans for new bridges. BEAP services are not intended to duplicate services already available to local agencies either through the MoDOT District or Central Office. The consultant services provided under this program are intended to maximize the availability of professional advice or services to local public agencies with technician and drafting time minimized. BEAP DOES NOT PROVIDE FUNDING FOR CONSTRUCTION OR CONSTRUCTION ENGINEERING SERVICES.

Only one study will be considered for funding to address a specific problem on a bridge. If the local agency requests an additional study, their request should include an explanation as to why the local agency did not use the results of the earlier study.

The Personnel

The structural and hydraulic engineering expertise necessary to provide this assistance to the local public agencies and their political subdivision will be provided from a pool of prequalified engineering consultants. The consultant firms selected from the prequalified pool will be required to use engineering personnel having a background which includes intensive bridge inspection experience and familiarity with developing bridge maintenance priorities and low cost improvement projects. (See Appendix 1 for list of consulting firms)

The personnel utilized by the Consultant shall be those identified in the consultant's proposal. If the consultant desires to utilize additional personnel not included in the original proposal, prior approval of the Bridge Unit is required.

The Administration

The local implementation of this program is under the immediate direction of Department's District Engineer, with coordination of the statewide consultant contract and technical policy interpretation being provided by the Bridge Unit. The statewide contract is normally in effect for a three year period, after which time it may be renegotiated or renewed. (See Appendix 4 for a sample contract).

A local public agency experiencing a bridge problem and desiring to use the services of this program need merely inform the District Personnel in that particular area and/or contact an approved consultant for assistance in developing a candidate project for consideration. The District's authorized representative or local agency will discuss the problem with the Consultant in order to prepare a fee estimate and a project tracking form for further eligibility review by the District and Bridge Unit. (See Appendix 2 for an example of a tracking form).

If the project is found to meet eligibility and program cost requirements, the tracking form is returned to the district so that the Consultant can be notified to proceed.

Upon completion of the consultant's evaluation of the bridge problem, the local public agency, Bridge Unit, and the District office shall be advised of the consultant's findings in a letter report. The letters and sketches shall be signed and sealed by a registered professional engineer.

All announcements, printings, and advertisements shall list the Missouri Division of Highway Safety, the Missouri Department of Transportation, and the Federal Highway Administration as program sponsors.

The Funding

The services of the program are generally provided free of direct costs to requesting, eligible local public agencies in Missouri through the cooperation of the Missouri Department of Transportation, Missouri Division of Highway Safety, and the MoDOT Local Technical Assistance Program. However, local agencies are expected to provide active assistance to the consultant during the project. Eligibility is based on the local agency not having personnel with sufficient engineering expertise to conduct effective bridge evaluations and develop immediate structural repair procedures and details.

If a project is approved, the consultant selected by the local agency will be reimbursed in accordance with the agreed hourly rates and actual direct non-salary costs as set forth in the Agreement. The consultant will be reimbursed for his actual costs incurred in performing each project to the extent authorized in the contract. Authorized actual costs include the consultant's direct personnel salary costs plus fringe benefits, travel, and other expenditure costs if directly related to this project and a pro-rated portion of his indirect or administrative overhead. In addition, the consultant will be compensated for a pre-specified percentage profit for performing the services of this program. For the convenience of the consultant and the department an agreed hourly rate will be used in the contract which reflect actual costs. Each particular project must receive prior approval from the District and Central office. This requires that the consultant submit a project tracking form to the district outlining the work to

be performed. The project tracking form shall outline project hours anticipated by personnel classification and by task (field or office review, report preparations, travel time, etc.). Development of these tracking forms should be done based on the consultant's initial contact with the local agency or district. If a project is approved, costs for travel expense and personnel time required for one site inspection during the course of the project are normally eligible for reimbursement.

Actual payments may be made by a check drawn on the State of Missouri by the Missouri Division of Highway Safety from funds apportioned to Missouri's Annual Highway Safety Work Program (HSP) to satisfy the objectives of Highway Safety Standard 612, "Highway Design, Construction, and Maintenance." These funds are made available by an agreement between MoDOT and the Missouri Division of Highway Safety, and are administered through the Missouri Department of Transportation. The agreement allows MoDOT to expend certain monies for highway safety, research, and education. Local Technology Funds (LTAP), combined with statewide planning and research funds, are also available and administered through the Missouri Department of Transportation. The (HSP) funds are normally available on a yearly basis from October 1 to September 30. The (LTAP) funds are available when the safety funds are depleted which are available through December 31.

For overall statewide funding of this program, the Commission agrees to provide an amount not to exceed \$192,000 in (HSP) funds and \$210,000 in (LTAP) funds for the three-year period of the agreement. The MoDOT Director or Chief Engineer is authorized to increase these amounts at their discretion in order to ensure availability of the consulting services to local agencies as contemplated by the agreement.

The consultant shall invoice the Bridge Unit for their services and the Bridge Unit personnel will, upon verification of the eligible charges, authorize the payment be made to the consultant.

A monthly reimbursement voucher must be submitted for projects utilizing safety (HSP) funds. No voucher is necessary for technology (LTAP) funds. (See Appendix 3 for reimbursement voucher).

Local Agency Responsibilities

- * Identify problem.
- * Initiate request for BEAP assistance.
- * Provide active assistance to consultant during the course of the project. (Examples are traffic control, access to site, trucks and equipment for load test, laboratory or coupon testing of steel and physical measurements under the consultant's supervision.)
- * Perform construction as recommended and notify district when complete.

Consultant Responsibilities

The services made available under this program are intended to be available for review of existing bridges where definite problems exist. Individual bridge reviews are anticipated to be performed in 60 or less total person hours per bridge. Time spent for site inspections to develop proposals is not considered eligible for reimbursement. If a project is approved, one site visit is normally reimbursable.

In general, the consultant's services could be considered to inspect the structure, analyze conditions, and formulate recommendations for the following:

- * Repair of damaged members.
- * Strengthening of old or weakened bridges or members with load posting restrictions.
- * Emergency flood damage and repairs.
- * Hydraulic adequacy and channel repair.
- * Load posting limitations.
- * Cost studies for repair or replacement alternatives.
- * Recommendations on whether or not to close a bridge.

The consultant services provided under this program are intended to maximize the availability of professional services to local public agencies with technician's or draftsmen's time minimized.

Also, the local agencies participation is expected in aspects of the study such as making physical measurements of the bridges, etc., under the consultant's supervision.

It is not intended that the services of this program will incorporate planning or design aspects of new bridge installations. If the consultant recommends closing of a bridge due to its unsafe condition, the consultant may suggest several alternate structure types, but actual design is not to be pursued under this program. The consultant may recommend low-cost bridge renovations projects, and it will be acceptable for him to prepare conceptual engineering sketches to illustrate his recommendations for remedial action. On individual bridge inspections, formal detailed reports are to be avoided where possible with study results documented in letter report.

It is also not intended for the service of the BEAP program to duplicate services already normally available to local agencies through the district or MoDOT's central office.

For example, when the local agency requests an inventory inspection or review of condition codes for a structure; the district office will normally perform this function as part of the non-state inspection program. If the local agency is merely requesting a new load rating capacity

of the existing structure, the Bridge Unit will provide this service upon receipt of comprehensive structural information forwarded by the district.

Load posting recommendations under BEAP are strictly limited to considerations involving comparisons with the State legal loads. Evaluations for special permit loads are ineligible for BEAP funding.

Proof load testing of concrete bridges are generally eligible for BEAP funding, but load tests for other types of structures are considered ineligible.

The consultant's review should also encompass traffic control devices and based on bridge and approach widths, approach alignments, etc., recommend any necessary revisions such as "Narrow Bridge" signing, object marker placements, etc.

Other features and requirements of the program include:

- * Consultant may work anywhere in the state.
- * No retainage.
- * Simultaneous distribution of reports (local agency, district, and Bridge Unit).
- * Consultant forwards copies of complete calculations with the report to support any recommendations concerning new load posting—Approved postings will be based on the final "as built" condition of any repairs in the field.
- * Submit invoice to Bridge Unit within 45 days of when the project study is complete (no partial invoices).

District Responsibilities

- * Advise local agencies in your district of the eleven prequalified consultants and that they may select any of these firms.
- * Coordination with local agency.
- * Check to see if local agency has their own engineering services.
- * Establish project information to give to consultant.
 - Provide relevant information (Inspection report, description of bridge, location of bridge, ratings, etc.)
 - Scope (Example: Develop retrofitting to Increase the load capacity of 40' steel I-beam bridge with timber deck from 5 tons to 10 tons).

- Receive project request (tracking form). Review the problem and scope of work.
- Prescreen eligibility and appropriateness of proposed project before forwarding project to Bridge Unit for review and concurrence.
- Forward tracking form and recommends project to Bridge Unit for review and concurrence.
- Notify consultant to proceed after concurrence of Bridge Unit.
- * Check with local agency to determine if they utilized the engineering services.
- * Inspect bridge repairs on closed structures before opening to traffic.
- * Verify construction was completed in accordance with the consultant's recommendation and prepare new SIA report based on the counties repair.
- * If the engineer recommends closing the bridge the district personnel will initiate a Critical Inspection Finding (CIF).

Bridge Unit Responsibilities

- * Contract administration.
- * Technical policy interpretation
- * Review project scope and estimate.
- * Review final report
- * Update approved load posting in MoDOT records and inform district office of approved posting revisions based on information or recommendations from the consultant. Quality assurance reviews or spot checks may be conducted at the option of the Bridge Unit. However, the consultant is considered responsible for any recommendations made. If strengthening is required by the engineer's recommendation, then approved postings will be based on information collected in the field on as-built conditions after construction.
- * Process Invoices. (Invoices should be sent directly to the MoDOT Bridge Unit from the consultant.)
- * Send payment to consultant.

Appendix 1

The Consultants

MoDOT has contracted with eleven consultant firms that have various offices that may be utilized across the state. The BEAP consultants' names and addresses are as follows:

11 Consultants will be utilized:

Bucher, Willis & Ratliff Corporation
7920 Ward Parkway, Suite 100
Kansas City, MO. 64114-2021
Phone 816/363-2696
FAX 816/363-0027

Modjeski & Masters, Inc.
804 North First Street
St. Louis, MO. 63102
Phone 314/588-8115
FAX 314/588-8117

Shafer, Kline & Warren, Inc.
107 Butler Street
P.O. Box 366
Macon, MO. 63552-0366
Phone 660/385-6441 800/229-8208
FAX 660/385-6614

Harrington & Cortelyou, Inc.
300 South Jefferson
Springfield, MO. 65806
Phone 417/863-9989
FAX 417/862-6390

HNTB Architects Engineers Planners
10 South Broadway, Suite 400
St. Louis MO. 63102
Phone 314/241-2808
FAX 314/241-1914

Burns & McDonnell
9400 Ward Parkway
Kansas City, MO. 64114-3319
Phone 816/333-9400
FAX 816/333-3690

CRD & Associates, Inc
10805 Sunset Office Dr., Suite 415
St. Louis, MO. 63127
Phone 314/909-9600
FAX 314/909-7555

Great River Engineering of Springfield, Inc.
3032-A South Fremont
Springfield, MO. 65804
Phone 417/886-7171
FAX 417/886-7591

Bartlett & West Engineers
600 Monroe St., Suite 100
Jefferson City, MO. 65101-3145
Phone 573/634-3181 888/200-6464
FAX 573/634-7904

McDonald & Warger, Inc.
PO Box 236
Liberty, MO. 64069
Phone 816/781-6182
FAX 816/781/5781

Shafer, Kline & Warren, Inc.
11100 West 91st Street
Overland Park, Ks. 66214-3216
Phone 913/888-7800 800/280-8901
FAX 913/888-7868

Harrington & Cortelyou, Inc.
911 Main St., Suite 1900
Kansas City, MO. 64105-5333
Phone 816/421-8386
FAX 816/471-6109

HNTB Architects Engineers Planners
715 Kirk Dr.
Kansas City, MO. 64105
Phone 816/472-1201
FAX 816/472-4060

Burns & McDonnell
1630 Des Peres Road
St. Louis, Mo. 63131
Phone 314/821-9016
FAX 314/821-5406

Hanson Professional Services Inc.
4227 Earth City Expressway, Suite 130
St. Louis, MO. 63045-1308
Phone 314/209-0006
FAX 314/209-0008

Appendix 2
BRIDGE ENGINEERING ASSISTANCE PROGRAM
PROJECT TRACKING FORM

Contact Personnel

District: _____ Bridge: _____
Local Agency: _____ Phone No. _____
Consulting Firm: _____ Fax No. _____
Project Manager: _____ Phone No. _____

Project Information Project Number (assigned by Bridge Unit): _____

District: _____ County: _____
Bridge Nos. _____
Describe problem fully: _____

Describe Scope of Services fully: _____

Anticipated calendar time required to complete project: _____

Costs

Engineering Fee Ceiling: _____
Total Invoice Cost: _____
Highway Safety Funds estimated balance: _____
Local Technology Transfer Assistance Funds estimated balance: _____

Milestone Dates

_____ Project initiated by Local Agency
_____ Project requested by Consultant
_____ Project received by District
_____ Scope of services and engineering fees reviewed and accepted by Bridge Unit
_____ Notice for consultant to Proceed by District
_____ Report reviewed and accepted by Bridge Unit
_____ Notice to Local Agency and consultant that Report accepted by District
_____ Invoice reviewed by Bridge Unit and submitted for payment
_____ Payment sent to Consultant

Did Local Agency utilize report? (Circle one) yes no

If no, Please comment. _____

General Comment:

MISSOURI DIVISION OF HIGHWAY SAFETY MONTHLY PROJECT REIMBURSEMENT VOUCHER

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PROJECT #:_____ **TITLE:**_____

TASK NO.	CUMULATIVE EXPENDITURES	MDHS%	MDHS \$ SHARE	TOTAL PREVIOUSLY VOUCHERED	NET CLAIM THIS PERIOD

PROJECT DIRECTOR APPROVAL		MDHS USE ONLY		AUDIT APPROVAL	
_____ Name	_____ Date	_____ Name	_____ Date	_____ Name	_____ Date

CCO Form BR11
Approved: 2/99 (DPP)
Revised: 2/02 (BDG)
Modified:

Appendix 4

**MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
BRIDGE ENGINEERING ASSISTANCE PROGRAM (BEAP)
CONSULTANT SERVICES AGREEMENT
(HOURLY RATE FEE ARRANGEMENT)**

THIS AGREEMENT is entered into by _____
(hereinafter, "Consultant"), and the Missouri Highways and Transportation
Commission (hereinafter, "Commission").

WITNESSETH:

WHEREAS, the Commission has need at various times over the next three (3)
years of a consultant to perform professional services in connection with the
administration of the Bridge Engineering Assistance Program (BEAP); and

WHEREAS, the Commission has selected the Consultant to provide those
services for local public bridge owners in Missouri on an as-needed basis.

NOW, THEREFORE, in consideration of the payments to be made and the
covenants set forth in this Agreement to be performed by the Commission, the
Consultant hereby agrees that it shall faithfully perform the professional services
called for by this Agreement in the manner and under the conditions described in this
Agreement.

(1) DEFINITIONS: The following definitions apply to these terms, as used
in this Agreement:

(A) "AASHTO" means the American Association of State Highway
and Transportation Officials.

(B) "COMMISSION" means the Missouri Highway and
Transportation Commission, an executive branch agency of state government, which
acts by and through its Director, Chief Engineer and others in the Missouri
Department of Transportation .

(C) "CONSULTANT" means the firm providing professional services
to the Commission as a party to this Agreement.

(D) "CONSULTANT'S REPRESENTATIVE" means the person or
persons designated in writing by the Consultant to represent that firm in negotiations,
communications, and various other contract administration dealings with the
Commission's Engineers.

(E) "DELIVERABLES" means all data, studies, documents, designs,

drawings, plans, specifications, or any other products prepared in performance of this Agreement, to be delivered to and become the property of the Commission pursuant to the terms and conditions set out in paragraph (10) of this Agreement.

(F) "DISADVANTAGED BUSINESS ENTERPRISE (DBE)" means an entity owned and controlled by a socially and economically disadvantaged individual as defined in 49 C.F.R. Part 23, which is certified as a DBE firm in Missouri by the Commission. Appropriate businesses owned and controlled by women are included in this definition.

(G) "ENGINEER" means the Chief Engineer or any other authorized representative of the Commission. Where the specific term "Chief Engineer" is used, it shall mean the Chief Engineer exclusively.

(H) "FHWA" or "FHA" means the Federal Highway Administration within the USDOT, headquartered at Washington, D.C., which acts through its authorized representatives.

(I) "INTELLECTUAL PROPERTY" consists of copyrights, patents, and any other form of intellectual property rights covering any data bases, software, inventions, training manuals, systems design or other proprietary information in any form or medium.

(J) "SUBCONSULTANT" means any individual, partnership, corporation, or joint venture to which the Consultant, with the written consent of the Engineer, subcontracts any part of the professional services under this Agreement but shall not include those entities which supply only materials or supplies to the Consultant.

(K) "SUSPEND" the services means that the services as contemplated herein shall be stopped on a temporary basis. This stoppage will continue until the Commission either decides to terminate the project or reactivate the services under the conditions then existing.

(L) "TERMINATE", in the context of this Agreement, means the cessation or quitting of this Agreement based upon the action or inaction of the Consultant, or the unilateral cancellation of this Agreement by the Commission.

(M) "USDOT" means the United States Department of Transportation, headquartered at Washington, D.C., which acts through its authorized representatives.

(N) "SERVICES" includes all professional engineering and related services and the furnishing of all equipment, supplies, and materials in conjunction with such services as are required to achieve the broad purposes and general objectives of this Agreement.

(2) SCOPE OF SERVICES:

(A) The services covered by this Agreement shall include furnishing the professional, technical, and other personnel and the equipment, material and all other things necessary to provide structural and hydraulic recommendations to local agencies in accordance with the policies and procedures of the Bridge Engineering Assistance Program (BEAP) from time to time as needed and requested by the Commission. The services generally to be provided by the consultant are set forth in Exhibit II to this Agreement, titled "General Scope of Services," which is attached hereto and made a part of this Agreement.

(B) Scope and Cost of Requested Services: Each individual request for services shall be covered by a Memorandum of Understanding submitted by the Consultant and approved by the Engineer. The memorandum will define the specific scope of work to be performed by the Consultant, the time limitations within which the work is to be performed, the specific deliverables required, and state the maximum price for those services. This ceiling shall not be exceeded prior to the approval of a supplemental Memorandum of Understanding. The Memorandum of Understanding will also indicate where the Consultant is to forward all deliverables. The standard BEAP Project Tracking Form, along with additional correspondence as needed to clarify the scope of work for an individual request will serve as the Memorandum of Understanding.

(3) TERM OF AGREEMENT: The Consultant's services are to commence upon execution of this Agreement and terminate three (3) years from the date of execution unless otherwise terminated prior to the date pursuant to the provisions of paragraph (10) of this Agreement. Upon agreement of all parties, this Agreement shall be renewed for an additional one (1) year term said term to begin on the day of termination of this Agreement.

(4) INFORMATION AND SERVICES PROVIDED BY THE COMMISSION:

(A) At no cost to the Consultant and in a timely manner, the Commission will provide available information of record which is pertinent to the requested services project to the Consultant upon request. In general, the Commission will provide the Consultant with the specific items or services set forth in Exhibit II or in the Memorandum of Understanding for the particular services requested by the Commission. The information provided by the Commission will generally be limited to information residing in the Commission's files pertaining to its administration of the National Bridge Inventory for Missouri and its accuracy cannot be guaranteed. If a project request is approved, the Consultant is expected to verify all information by visiting the site, and obtain additional information that may be available from the local bridge owner.

(B) The Consultant shall thoroughly review information obtained at the bridge site along with the information provided by the Commission and local agency concerning the requested services and will as expeditiously as possible advise the Engineer of any of that information which the Consultant believes is inaccurate or inadequate or would otherwise have an effect on any of its activities

under this Agreement. In such case, the Commission shall provide the Consultant with a revised Memorandum of Understanding upon which the Consultant is entitled to rely. The Consultant shall not be liable for any errors, omissions, or deficiencies in the Consultant's services resulting from inaccurate or inadequate information furnished by the Commission which inaccuracies or inadequacies are not detected by the Consultant.

(5) RESPONSIBILITY OF THE CONSULTANT:

(A) The Consultant shall comply with applicable state and federal laws and regulations governing these services, as published and in effect on the date of this Agreement or any subsequent Memorandums of Understanding. The Consultant shall provide the services in accordance with the criteria and requirements established and adopted by the Commission; and if none are expressly established in this Agreement, published manuals and policies of the Commission which shall be furnished by the Commission upon request; and, absent the foregoing, manuals and policies of AASHTO, as published and in effect on the date of this Agreement or any subsequent Memorandums of Understanding.

(B) Without limiting the foregoing, the performance of these services will be in accordance with the specific criteria and project procedures as indicated by the information set out in Exhibit II and the appropriate Memorandum of Understanding.

(C) The Consultant shall be responsible for the professional quality, technical accuracy, and the coordination of all deliverables or any other services furnished under this Agreement. At any time during any subsequent stage of project development or phase of work performed by others based upon any deliverables or other services provided by the Consultant, the Consultant shall prepare any additional deliverables or other services needed to correct any negligent acts, errors, or omissions of the Consultant or anyone for whom it is legally responsible in failing to comply with the foregoing standard. The services necessary to correct such negligent acts, errors, or omissions shall be performed without additional compensation, even though final payment may have been received by the Consultant. The Consultant shall provide such services as expeditiously as is consistent with professional performance. Acceptance of the services will not relieve the Consultant of the responsibility to correct such negligent acts, errors, or omissions.

(D) All deliverables produced under this agreement shall be signed, sealed, and dated by the appropriate party responsible for performance of the services and who possesses appropriate registration in the state of Missouri to perform the type of services included in this Agreement or any subsequent Memorandum of Understanding. All requirements for professional registration and the signing and sealing of deliverables shall be in accordance with Missouri state law. All deliverables which are not the final version shall carry the words "Draft or Preliminary" or other similar language in an obvious location where it can readily be found, easily read, and is not obscured by other markings, as a disclosure to others that the deliverables are incomplete or preliminary. When the deliverables are

presented in their final form, the word "Draft or Preliminary" or other similar language shall be removed and the deliverables thereupon signed, sealed, and dated as previously described in this paragraph.

(E) Where the scope of services requires the preparation of completed plans, plans submitted for review by permit authorities, and plans issued for construction, the plans shall be signed, sealed, and dated by a professional engineer registered in the State of Missouri. Incomplete or preliminary plan(s), when submitted for review by others, shall not be sealed, but the name of the responsible engineer, along with the engineer's Missouri registration number, shall be indicated on the plan(s) or included in the transmittal document. In addition, the phrase "Preliminary - Not for Construction," or similar language, shall be placed on the incomplete or preliminary plan(s) in an obvious location where it can readily be found, easily read, and not obscured by other markings, as a disclosure to others that the plan(s) are incomplete or preliminary. When the plan(s) are completed, the phrase "Preliminary - Not for Construction" or similar language shall be removed and the plan(s) shall thereupon be sealed.

(F) The Consultant shall cooperate fully with the Commission and its Engineers, consultants, and contractors on adjacent projects, and with municipalities and local government officials, public utility companies and others as may be directed by the Engineer. This may include attendance at meetings, discussions, and hearings as requested by the Engineer.

(G) In the event any lawsuit or court proceeding of any kind is brought against the Commission, arising out of or relating to the Consultant's activities or services performed under this Agreement, including any Memorandum of Understanding, or any subsequent stage of project development or phase of work or any project of construction undertaken employing the deliverables provided by the Consultant in performing this Agreement, including any Memorandum of Understanding, the Consultant shall have the affirmative duty to assist the Commission in preparing the Commission's defense, including, but not limited to, production of documents, trials, depositions, or court testimony. Any assistance given to the Commission by the Consultant will be compensated at an amount or rate negotiated between the Commission and the Consultant as will be identified in a separate agreement between the Commission and the Consultant. To the extent the assistance given to the Commission by the Consultant was necessary for the Commission to defend claims and liability due to the Consultant's negligent acts, errors, or omissions, the compensation paid by the Commission to the Consultant will be reimbursed to the Commission.

(6) NO SOLICITATION WARRANTY: The Consultant warrants that it has not employed or retained any company or person, other than a bona fide employee working for the Consultant, to solicit or secure this Agreement, and that it has not paid or agreed to pay any company or person, other than a bona fide employee, any fee, commission, percentage, brokerage fee, gifts, or any other consideration, contingent upon or resulting from the award or making of this Agreement. For breach or violation of this warranty, the Commission will have the right to terminate this Agreement without liability, or at its discretion, to deduct from the Agreement price or

consideration, or otherwise recover, the full amount of such fee, commission, percentage, brokerage fee, gifts, or contingent fee, plus costs of collection including reasonable attorney's fees.

(7) SUBCONSULTANTS:

(A) The Consultant agrees that except for those firms and for those services listed in the appropriate Memorandum of Understanding, there shall be no transfer of engineering services performed under this Agreement without the written consent of the Commission. Subletting, assignment, or transfer of the services or any part thereof to any other corporation, partnership, or individual is expressly prohibited. Any violation of this clause will be deemed cause for termination of this Agreement.

(B) The Consultant agrees, and shall require the selected Subconsultants, to maintain books, documents, papers, accounting records, and other evidence pertaining to direct costs and expenses incurred under the Agreement and to make such materials available at their offices at reasonable times during the Agreement period and for three (3) years from the date of final payment under the Agreement, for inspection by the Commission or any of its authorized representative, and copies thereof shall be furnished.

(C) Unless waived or modified by the Commission, the Consultant agrees to require, and shall provide evidence to the Commission, that those Subconsultants shall maintain commercial general liability, automobile liability, and worker's compensation and employer's liability insurance, for not less than the period of services under such subconsultant agreements, and in not less than the following amounts:

1. Commercial General Liability: \$400,000 per claim up to \$2,500,000 per occurrence;
2. Automobile Liability: \$400,000 per claim up to \$2,500,000 per occurrence;
3. Worker's Compensation in accordance with the statutory limits; and Employer's Liability: \$1,000,000; and

(D) The subletting of the services will in no way relieve the Consultant of its primary responsibility for the quality and performance of the services to be performed hereunder and the Consultant shall assume full liability for the services performed by its Subconsultants.

(E) The payment for the services of any Subconsultants will be reimbursed at cost by the Commission in accordance with the submitted invoices for such services, as set forth in paragraph (8), entitled "Compensation".

(F) The Consultant agrees to furnish a list of any Commission-approved DBE subconsultants under this Agreement upon the request of the Commission.

(G) The Consultant agrees that any agreement between the consultant and any subconsultant shall be an actual cost plus fixed fee agreement if the amount of the agreement between the consultant and subconsultant exceeds \$25,000.

(8) COMPENSATION: The Consultant shall be compensated based on hourly salary costs of employees, salary related expenses, general overhead and profit, and direct non-salary costs as allowed by 48 CFR Part 31, the Federal Acquisition Regulations (FAR), and 23 CFR 172, Administration of Engineering and Design Related Service Contracts. Payment under the provisions of this Agreement is limited to those costs incurred as restricted by Commission reimbursement policy and in accordance with generally accepted accounting principles to the extent that they are considered necessary for execution of the work. The following provisions apply with respect to the payment of fees to the Consultant:

(A) Labor Costs, Overhead and Profit: Payment shall be made based on the actual productive hours expended by personnel multiplied by the corresponding hourly rates indicated in the "Schedule of Hourly Labor Billing Rates", attached as Exhibit I and incorporated herein. These rates include overhead and profit. Profit is established at a fixed 14% of allowable salary costs for Consultant's personnel. The schedule is effective for three (3) year(s) but may be revised no more than once each year to reflect changes in salary and overhead costs, if applicable, from the date of execution of this Agreement. All information requested in the attached Exhibit I shall be provided by the Consultant.

1. Overhead - Direct Labor: Direct labor overhead costs include additions to payroll cost for holidays, sick leave, vacation, group insurance, workers' compensation insurance, social security taxes (FICA), unemployment insurance, disability taxes, retirement benefits, and other related items. Direct labor overhead is shown on Exhibit I.

2. Overhead - General and Administrative: General and administrative overhead costs include administrative salaries (including non-productive salary of associates and employees), officer services, equipment rental and maintenance, office rent and utilities, office maintenance, office supplies, insurance, taxes, professional development expenses, legal and audit fees, professional dues and licenses, use of electronic computer for accounting, and other related items. The percentage of direct straight time payroll to be added to salary costs is shown on Exhibit I.

(B) Direct Non-Salary Costs: Payment shall be made based on the actual costs of Consultant's direct non-salary costs incurred in fulfilling the terms of this Agreement. Examples of direct non-salary costs include but are not limited to travel and subsistence, subcontract services, reproductions, computer charges, materials and supplies, and other related items necessary for completion of the

services. Direct non-salary costs will be reimbursed at actual cost without any override or additives.

(C) Property and Equipment: The property and equipment used on this project such as automotive vehicles, access equipment, office equipment, etc., shall be owned, rented or leased by the Consultant, and charges will be made to the project for the use of such property at the rate established by company policies and practices. Approval by the Commission will be required prior to acquisition of reimbursable special equipment.

(D) Changes in Hourly Rates: The hourly rates indicated in Exhibit I may also be revised when, upon expiration of the existing Exhibit I, a new "Schedule of Hourly Labor Billing Rates" is submitted by the Consultant and approved by the Engineer. The Consultant shall submit all revisions to Exhibit I no later than thirty (30) days prior to the expiration date of the effective Exhibit I. If no revisions are submitted, the most recent billing rates established in Exhibit I will be extended for the following year.

(E) Individual Project Payment Ceiling: Total payment for an individual project carried out under this Agreement shall be limited to the "contract ceiling" stated in the Memorandum of Understanding covering that specific investigation. No work shall be done or costs incurred in excess of this ceiling until a supplemental Memorandum of Understanding is approved by the Engineer.

(F) Payments: The Consultant may submit an invoice for services rendered to the Commission after each project is complete. The invoice shall indicate the project is complete. Upon receipt of the invoice, the Commission will, as soon as practicable, pay the Consultant for the services rendered. No portion of the invoice will be retained. However, if an audit indicates an invoice(s) was incorrect, the Consultant will reimburse the Commission immediately upon notification.

(G) Funds from the Missouri Division of Highway Safety or MoDOT Technology Transfer Funds will be used to reimburse the Consultant during the period of the Agreement. The Consultant recognizes that funding for the services contemplated in the Agreement is dependent on congressional actions and overall program funding limits for the Bridge Engineering Assistance Program are not guaranteed.

(H) The Consultant recognizes that the Commission has identical agreements with other consultants to provide these same services to local agencies. The total amount the Consultant will receive under this Agreement is dependent upon the number and scope of approved projects for which Consultant is selected by counties, cities, and other political subdivisions.

(I) Audit: The Commission, if it so elects, will conduct a final cost audit of the Consultant's services performed under the terms of this Agreement. The Consultant will, during normal working hours, permit access to all records and books for the audit.

(9) PERIOD OF SERVICE:

(A) The services, and if more than one then each phase thereof, shall be completed in accordance with the schedule contained in the Memorandum of Understanding for each request for services. The Consultant and the Commission will be required to meet this schedule.

(B) The Commission will grant time extensions for delays due to unforeseeable causes beyond the control of and without fault or negligence of the Consultant. Requests for extensions of time shall be made in writing by the Consultant, before that phase of work is scheduled to be completed, stating fully the events giving rise to the request and justification for the time extension requested. Such extension of time shall be the sole allowable compensation for all such delays.

(C) The Consultant and Commission agree that time is of the essence, and the Consultant and Commission will be required to meet the schedules in the appropriate Memorandum of Understanding. In the event of delays due to unforeseeable causes beyond the control of and without fault or negligence of the Consultant, no claim for damage shall be made by either party. An extension of time shall be the sole allowable compensation for any such delays.

(D) As used in this provision, the term "delays due to unforeseeable causes" includes the following:

1. War or acts of war, declared or undeclared;
2. Flooding, earthquake, or other major natural disaster preventing the Consultant from performing necessary services at the project site, or in the Consultant's offices, at the time such services must be performed;
3. The discovery on the project of differing site conditions, hazardous substances, or other conditions which, in the sole judgment of the Engineer, justifies a suspension of the services or necessitates modifications of the project design or plans by the Consultant;
4. Court proceedings;
5. Changes in services or extra services.
6. Delays caused by the local bridge owner, MoDOT district or Bridge Division.

(10) SUSPENSION OR TERMINATION OF AGREEMENT:

(A) The Commission may, without being in breach hereof, suspend or terminate the Consultant's services under this Agreement, or any services included in an active Memorandum of Understanding, for cause or for the convenience of the Commission, upon giving to the Consultant at least fifteen (15) days' prior written notice of the effective date thereof. The Consultant shall not

accelerate performance of services during the fifteen (15) day period without the express written consent of the Commission.

(B) Should the Agreement be suspended or terminated for the convenience of the Commission, the Commission will pay to the Consultant its costs as set forth in paragraph (8)(A), for actual hours expended prior to such suspension or termination multiplied by the hourly rates included in the "Schedule of Hourly Billing Rates", plus reasonable hours incurred by the Consultant in suspending or terminating the services. The payment will make no other allowances for damages or anticipated fees or profits. In the event of a suspension of the services, the Consultant's compensation and schedule for performance of services hereunder shall be equitably adjusted upon resumption of performance of the services.

(C) The Consultant shall remain liable to the Commission for any claims or damages occasioned by any failure, default, error or omission in carrying out the provisions of this Agreement during its life, including those giving rise to a termination for non-performance or breach by Consultant. This liability shall survive and shall not be waived, or estopped by final payment under this Agreement.

(D) The Consultant shall not be liable for any errors or omissions contained in deliverables which are incomplete as a result of a suspension or termination where the Consultant is deprived of the opportunity to complete the Consultant's services.

(11) OWNERSHIP OF DRAWINGS AND DOCUMENTS:

(A) All deliverables, drawings and documents prepared in performance of this Agreement shall be delivered to and become the property of the Commission and the local agency upon suspension, abandonment, cancellation, termination, or completion of the Consultant's services hereunder. Basic survey notes, design computations, and other data prepared under this Agreement shall be made available for use by the Commission or local agency without further compensation and without restriction or limitation on their use.

(B) The Commission may incorporate any portion of the deliverables into a project other than that for which they were performed, without further compensation to the Consultant; provided however, that (1) such deliverables shall thereupon be deemed to be the work product of the Commission and the Commission shall use same at its sole risk and expense; and (2) the Commission shall remove the Consultant's name, seal, endorsement, and all other indices of authorship from the deliverables.

(C) If the local agency incorporates any portion of the work into a project other than for which it was performed, it shall be deemed the work of the local agency. The Commission shall not be liable to further compensate the Consultant for such local agency use, or disclosure of information by a local agency concerning the deliverables to any party outside this Agreement

(12) DECISIONS UNDER THIS AGREEMENT AND DISPUTES:

(A) The Engineer will determine the acceptability of the drawings, specifications, and estimates and all other deliverables to be furnished, and will decide the questions that may arise relative to the proper performance of this Agreement. The determination of acceptable deliverables may occur following final payment, and as late as during the construction of the project which decisions shall be conclusive, binding and incontestable, if not arbitrary, capricious or the result of fraud.

(B) The Engineer will decide all questions which may arise as to the quality, quantity, and acceptability of services performed by Consultant and as to the rate of progress of the services; all questions which may arise as to the interpretation of the plans and specifications or other deliverables; all questions as to the acceptable fulfillment of the Agreement on the part of the Consultant; the proper compensation for performance or breach of the Agreement; and all claims of any character whatsoever in connection with or growing out of the services of the Consultant, whether claims under this Agreement or otherwise. The Engineer's decisions shall be conclusive, binding and incontestable if not arbitrary, capricious of the result of fraud.

(C) If the Consultant has a claim for payment against the Commission which in any way arises out of the provisions of this Agreement or the performance or non-performance hereunder, written notice of such claim must be made in triplicate within sixty (60) days of the Consultant's receipt of final payment for each individual project. Notwithstanding paragraph 20 of this Agreement, the notice of claim shall be personally delivered or sent by certified mail to the office of the Secretary to the Commission in Jefferson City, Missouri. The notice of claim shall contain an itemized statement showing completely and fully the items and amounts forming the basis of the claim and the factual and legal basis of the claim.

(D) Any claim for payment or an item of any such claim not included in the notice of claim and itemized statement, or any such claim not filed within the time provided by this provision shall be forever waived, and shall neither constitute the basis of nor be included in any legal action, counterclaim, set-off, or arbitration against the Commission.

(E) The claims procedure in paragraphs 12 (C) and (D) do not apply to any claims of the Commission against the Consultant. Further, any claims of the Commission against the Consultant under this Agreement are not waived or estopped by the claims procedure in paragraphs 12 (C) and (D).

(13) SUCCESSORS AND ASSIGNS: The Commission and the Consultant agree that this Agreement and all agreements entered into under the provisions of this Agreement shall be binding upon the parties hereto and their successors and assigns.

(14) INDEMNIFICATION RESPONSIBILITY:

(A) The Consultant agrees to save harmless the Commission, the FHWA, and local agency from all liability, losses, damages, and judgments for bodily injury, including death, and property damage to the extent due to the Consultant's negligent acts, errors, or omissions in the services performed or to be performed under this Agreement, including those negligent acts, errors, or omissions of the Consultant's employees, agents, and Subconsultants.

(B) The Consultant shall be responsible for the direct damages incurred by the Commission or local agency as result of the negligent acts, errors, or omissions of the Consultant or anyone for whom the Consultant is legally responsible, and for any losses or costs to repair or remedy any subsequent stage of project development, phase of work, or project construction as a result of such negligent acts, errors or omissions; provided, however, the Consultant shall not be liable to the Commission or local agency for such losses, costs, repairs and/or remedies which constitute betterment of or an addition of value to the subsequent stages of project development or the construction of the project.

(C) Neither the Commission's review, approval or acceptance of, or payment for, any services required under this Agreement, nor the termination of this Agreement prior to its completion, will be construed to operate as a waiver of any right under this Agreement or any cause of action arising out of the performance of this Agreement. This indemnification responsibility survives the completion of this Agreement, as well as the completion of subsequent stages of project development or the construction of the project at some later date, and remains as long as a construction contractor may file or has pending a claim or lawsuit against the Commission or local agency on this project arising out of the Consultant's services hereunder.

(15) INSURANCE:

(A) The Consultant shall maintain commercial general liability, automobile liability, and worker's compensation and employer's liability insurance in full force and effect to protect the Consultant from claims under Worker's Compensation Acts, claims for damages for personal injury or death, and for damages to property arising from the negligent acts, errors, or omissions of the Consultant and its employees, agents, and Subconsultants in the performance of the services covered by this Agreement, including, without limitation, risks insured against in commercial general liability policies.

(B) The Consultant shall also maintain professional liability insurance to protect the Consultant against the negligent acts, errors, or omissions of the Consultant and those for whom it is legally responsible, arising out of the performance of professional services under this Agreement.

(C) The Consultant's insurance coverages shall be for not less than the following limits of liability:

1. Commercial General Liability: \$400,000 per claim up to \$2,500,000 per occurrence;
2. Automobile Liability: \$400,000 per claim up to \$2,500,000 per occurrence;
3. Worker's Compensation in accordance with the statutory limits; and Employer's Liability: \$1,000,000; and
4. Professional ("Errors and Omissions") Liability: \$1,000,000.00, each claim and in the annual aggregate.

(D) The Consultant shall, upon request at any time, provide the Commission with certificates of insurance evidencing the Consultant's commercial general or professional liability ("Errors and Omissions") policies and evidencing that they and all other required insurance is in effect, as to the services under this Agreement.

(E) Any insurance policy required as specified in paragraph No. (15) shall be written by a company which is incorporated in the United States of America or is based in the United States of America. Each insurance policy must be issued by a company authorized to issue such insurance in the State of Missouri.

(16) NONDISCRIMINATION CLAUSE: The Consultant shall comply with all the provisions of Executive Order No. 94-03, issued by the Honorable Mel Carnahan, Governor of Missouri, on the fourteenth (14th) day of January 1994, which executive order is incorporated herein by reference and is made a part of this Agreement. This Executive Order promulgates a Code of Fair Practices for the Executive Branch of Missouri Government and prohibits discrimination against recipients of services, and employees or applicants or employment of state consultants and subconsultants, on the grounds of race, color, religion, national origin, sex, age, disability, or veteran status. The Consultant shall also comply with all state and federal statutes applicable to the Consultant relating to nondiscrimination, including, but not limited to, Chapter 213, RSMo; Title VI and Title VII of the Civil Rights Act of 1964 as amended (42 U.S.C. Sections 2000d and 2000e, *et seq.*); and with any provision of the "Americans with Disabilities Act" (42 U.S.C. Section 12101, *et seq.*).

(17) ACTIONS: No action may be brought by either party hereto concerning any matter, thing, or dispute arising out of or relating to the terms, performance, non-performance, or otherwise of this Agreement except in the Circuit Court of Cole County, Missouri. The parties agree that this Agreement is entered into at Jefferson City, Missouri, and substantial elements of its performance will take place or be delivered at Jefferson City, Missouri, by reason of which the Consultant consents to venue of any action against it in Cole County, Missouri. The Consultant shall cause this provision to be incorporated into all of its agreements with, and to be binding upon, all subconsultants of the Consultant in the performance of this Agreement.

(18) AUDIT OF RECORDS: For purpose of an audit, the Consultant shall maintain all those records relating to direct costs and expenses incurred under this Agreement, including but not limited to invoices, payrolls, bills, receipts, etc. These records must be available at all reasonable times to the Commission or its designees and representatives, at the Consultant's offices, at no charge, during the Agreement period and any extension thereof, and for the three (3) year period following the date of final payment made under this Agreement. If the Commission has notice of a potential claim against the Consultant and/or the Commission based on the Consultant's services under this Agreement, the Consultant, upon written request of the Commission, shall retain and preserve its records until the Commission has advised the Consultant in writing that the disputed claim is resolved.

(19) NOTICE TO THE PARTIES: All notices or communications required by this Agreement shall be made in writing, and shall be effective upon receipt by the Commission or the Consultant at their respective addresses of record. Letters or other documents which are prepared in 8.5 x 11 inch format may be delivered by telefax, provided that an original is received at the same address as that to which that telefax message was sent, within three (3) business days of the telefax transmission. Either party may change its address of record by written notice to the other party.

(A) Notice to the Commission: Notices to the Commission shall be addressed and delivered to the following Engineer, who is hereby designated by the Commission as its primary authorized Engineer for administration, interpretation, review, and enforcement of this Agreement and the services of the Consultant hereunder:

Shyam Gupta, P.E.
State Bridge Engineer, Bridge Engineering Unit
Missouri Department of Transportation
P.O. Box 270
Jefferson City, Missouri 65102
Telefax No.: (573) 526-5488
Telephone No.: (573) 751-0265

The Commission reserves the right to substitute another person for the individual named at any time, and to designate one or more other Engineers to have authority to act upon its behalf generally or in limited capacities, as the Commission may now or hereafter deem appropriate. Such substitution or designations shall be made by the Chief Engineer in a written notice to the Consultant.

(B) Notice to the Consultant: Notices to Consultant shall be addressed and delivered to Consultant's representative, as follows:

[Addressee Name]
[Addressee Title]
[Consultant Firm Name]
[Street Address and P.O. Box, if any]
[City], [State] [Zip Code]
Telefax No.: [Give Number]
Telephone No.: [Give Number]

The Consultant reserves the right to substitute another person for the individual named at any time, and to designate one or more Consultant's Representatives to have authority to act upon its behalf generally or in limited capacities, as the Consultant may now or hereafter deem appropriate. Such substitutions or designations shall be made by the Consultant's president or chief executive officer in a written notice to the Commission.

(20) LAW OF MISSOURI TO GOVERN: This Agreement shall be construed according to the laws of the State of Missouri. The Consultant shall comply with all local, state, and federal laws and regulations which govern the performance of this Agreement.

(21) CONFIDENTIALITY: The Consultant agrees that the Consultant's services under this Agreement is a confidential matter between the Consultant, the local agency, and the Commission. The Consultant shall not disclose any aspect of the Consultant's services under this Agreement to any other person, corporation, governmental entity, or news media, excepting only to such employees, subconsultants, and agents as may be necessary to allow them to perform services for the Consultant in the furtherance of this Agreement, without the prior approval of the Commission's Engineer; provided, however, that any confidentiality and non-disclosure requirements set out herein shall not apply to any of the Consultant's services or to any information which (1) is already in the public domain or is already in the Consultant's possession at the time the Consultant performs the services or comes into possession of the information, (2) is received from a third party without any confidentiality obligations, or (3) is required to be disclosed by governmental or judicial order. Any disclosure pursuant to a request to the Commission under Chapter 610, RSMo, shall not constitute a breach of this Agreement. The content and extent of any authorized disclosure shall be coordinated fully with and under the direction of the Commission's Engineer, in advance.

(22) SOLE BENEFICIARY: This Agreement is made for the sole benefit of the parties hereto and nothing in this Agreement shall be construed to give any rights or benefits to anyone other than the Commission and the Consultant.

(23) SEVERABILITY AND SURVIVAL:

(A) Any provision or part of this Agreement held to be void or

unenforceable under any law or regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon the Commission and the Consultant.

(B) All express representations, indemnifications, or limitations of liability made or given in this Agreement will survive the completion of all services by the Consultant under this Agreement or the termination of this Agreement for any reason.

(24) PAYMENT BOND: In the event a subconsultant is used for any services under this Agreement, Consultant shall provide a payment bond under Section 107.170 RSMo. (2000), as amended, for any services which are printing, aircraft, archaeology, surveying, hazardous waste or geotechnical including but not limited to the collection of soil samples. Any payment bond must be acceptable to the Commission and must be provided prior to the performance of service. The cost for the payment bond must have been included in the fee of the Consultant under this Agreement.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their respective proper officials.

Executed by the Consultant the _____ day of _____, 20____.

Executed by the Commission the _____ day of _____, 20____.

MISSOURI HIGHWAYS AND
TRANSPORTATION COMMISSION

[CONSULTANT'S FIRM NAME]

By _____

By _____

Title: _____

Title: _____

ATTEST:

ATTEST:

Secretary to the Commission

Title: _____

APPROVED AS TO FORM:

APPROVED AS TO FORM:

Commission Counsel

Title: _____

EXHIBIT I

ESTIMATE OF COST

	Actual Hourly Labor <u>Rate</u>	Payroll Additives (____%)	G & A Overhead (____%)	Profit (14%)	Billing <u>Rate</u>
Partner					
Engineer					
Technician					
Typist					

SAMPLE FORMAT

OVERHEAD RATE BREAKDOWN FOR THE YEAR _____

PAYROLL ADDITIVES

_____%
_____%
_____%
_____%

Total Payroll Additives

_____%

GENERAL AND ADMINISTRATIVE OVERHEAD

_____%
_____%
_____%
_____%

Total General and Administrative Overhead

_____%

TOTAL OVERHEAD

_____%

Less Unallowable Items

_____%
_____%
_____%
_____%

TOTAL ALLOWABLE OVERHEAD

_____%

SAMPLE FORMAT

EXHIBIT II
GENERAL SCOPE OF SERVICES
Bridge Engineering Assistance Program (BEAP)

Operational procedures and items not specifically covered by the Agreement, this General Scope of Services, or the Memorandum of Understanding shall be in accordance with the latest version of MoDOT's Policy and Procedures Manual for the Bridge Engineering Assistance Program.

The Purpose

The hydraulic and structural adequacy of the bridges on their street, road, and highway system is a major concern to the local public agencies of Missouri. Local public entities need to conduct effective bridge evaluations to determine priorities for maintenance, rehabilitation, and replacements. Many of these local agencies and their political subdivisions have neither the funds nor the engineering expertise necessary to conduct effective bridge evaluations or determine bridge maintenance and repair priorities.

As a result, the Missouri Highway and Transportation Commission has developed the BRIDGE ENGINEERING ASSISTANCE PROGRAM to provide Missouri local public agencies with the assistance necessary to study bridge engineering problems.

The services of this program are to be used for bridges which are located on public roads under the jurisdiction of local public agencies which are located off of the State System. These services are intended to be available to attack definite operational or structural problems presently being experienced on an existing bridge, and are not intended to be used for the development of detailed plans for new bridges. BEAP services are not intended to duplicate services already available to local agencies either through the MoDOT district or Central Office. The consultant services provided under this program are intended to maximize the availability of professional advice or services to local public agencies with technician and drafting time minimized.

The Personnel

The structural and hydraulic engineering expertise necessary to provide this assistance to the local public agencies and their political subdivision will be provided from a pool of prequalified engineering consultants. The consultant firms selected from the prequalified pool will be required to use engineering personnel having a background which includes intensive bridge inspection experience and familiarity with developing bridge maintenance priorities and low cost improvement projects.

The personnel utilized by the Consultant shall be those identified in the consultant's proposal. If the consultant desires to utilize additional personnel not included in the original proposal, prior approval of the Bridge Unit is required.

EXHIBIT II

The Administration

The local implementation of this program is under the immediate direction of the Department's District Engineer, with coordination of the statewide consultant contract and technical policy interpretation being provided by the Bridge Unit.

A local public agency experiencing a bridge problem and desiring to use the services of this program need merely inform the District Personnel in that particular area and/or contact an approved consultant for assistance in developing a candidate project for consideration. The District's authorized representative or local agency will discuss the problem with the Consultant in order to prepare a fee estimate and a project tracking form for further eligibility review by the District and Bridge office. (See BEAP Manual Appendix 2 for an example of a tracking form.)

If the project is found to meet eligibility and program cost requirements, the tracking form is returned to the district so that the Consultant can be notified to proceed.

Upon completion of the consultant's evaluation of the bridge problem, the local public agency, Bridge Unit, and the District office shall be advised of the consultant's findings in a letter report. The letters and sketches shall be signed and sealed by a registered professional engineer.

The Funding

The services of the program are generally provided free of direct costs to requesting, eligible local public agencies in Missouri through the cooperation of the Missouri Department of Transportation, Missouri Division of Highway Safety, and the MoDOT Local Technical Assistance Program. However, local agencies are expected to provide active assistance to the consultant during the project. Eligibility is based on the local agency not having personnel with sufficient engineering expertise to conduct effective bridge evaluations and develop immediate structural repair procedures and details.

If a project is approved, the consultant selected by the local agency will be reimbursed in accordance with the agreed hourly rates and actual direct non-salary costs as set forth in the Agreement.

Each particular project must receive prior approval from the District and Central office. This requires that the consultant submit a project tracking form to the district outlining the work to be performed. The project tracking form shall outline project hours anticipated by personnel classification and by task (field or office review, report preparations, travel time, etc.). Development of these tracking forms should be done based on the consultant's initial contact with the local agency or district. If a project is approved, costs for travel expense and personnel time required for one site inspection during the course of the project are normally eligible for reimbursement.

Actual payments may be made by a check drawn on the State of Missouri by the Missouri Division of Highway Safety from funds apportioned to Missouri's Annual Highway Safety

EXHIBIT II

Work Program (HSP) to satisfy the objectives of Highway Safety Standard 612, "Highway Design, Construction, and Maintenance." These funds are made available by an agreement between MoDOT and the Missouri Division of Highway Safety, and are administered through the Missouri Department of Transportation. The agreement allows MoDOT to expend certain monies for highway safety, research, and education. Local Technology Funds (LTAP), combined with statewide planning and research funds, are also available and administered through the Missouri Department of Transportation. The (HSP) funds are normally available on a yearly basis from October 1 to September 30. The (LTAP) funds are available when the safety funds are depleted which are available through December 31.

For overall statewide funding of this program, the Commission agrees to provide an amount not to exceed \$192,000 in (HSP) funds and \$210,000 in (LTAP) funds for the three-year period of the agreement. The MoDOT Director or Chief Engineer is authorized to increase these amounts at their discretion in order to ensure availability of the consulting services to local agencies as contemplated by the agreement.

The consultant shall invoice the Bridge office for their services and the Bridge office personnel will, upon verification of the eligible charges, authorize the payment be made to the consultant. A monthly reimbursement voucher must be submitted for projects utilizing safety (HSP) funds. No voucher is usually necessary for technology (LTAP) funds. (See appendix 3 of the BEAP Manual for an example reimbursement voucher).

Information and Services Provided by the Commission

(A) The Commission will provide available information of record which may reside in the Commission's files and is pertinent to this project to the Consultant upon request. In addition, the Commission will provide Consultant with the specific items or services set forth as follows:

1. A copy of the latest inspection report or other relevant information on the bridge including a photograph, if desired. (District office)
2. Missouri's Bridge Inspection Rating Manual. (Bridge Unit)
3. A portion of a map showing the bridge location. (District)
4. Assistance with interpretation of MoDOT policies. (Bridge Unit)
5. Assistance with coordination with the local agency. (District)
6. Statewide consultant contract administration. (Bridge Unit)
7. Provide notice to proceed. (District)

EXHIBIT II

General Scope and Typical Procedures for Service

The general services to be provided by Consultant, all in accordance with the policies of the Commission, are set forth as follows:

1. Planning Stage

The Consultant will:

A. Receive a request from the district office or local agency for a potential project. In general, the Consultant's services could be used to inspect the bridge, analyze conditions, and formulate recommendations for the following:

- I. Repair of damaged members.
- II. Strengthening of old or weakened bridges or members with load posting restrictions.
- III. Emergency flood damage and repairs.
- IV. Hydraulic adequacy and channel repair.
- V. Load posting limitations.
- VI. Cost studies for repair or replacement alternatives.
- VII. Recommendations on whether or not to close a bridge.

B. Review information available from the local agency, district, or support center and develop a fee ceiling. (Field trips for this purpose are generally not reimbursable. However, if unexpected conditions are encountered, the project estimate can be increased subject to Bridge Unit approval for the increased amount. In these cases, the consultant should notify the Bridge Unit as soon as possible and provide a revised estimate.)

C. Submit fee ceiling along with a brief definition of the project scope and anticipated calendar time required to complete the project to the district office. This information is included on the BEAP project tracking form submitted to the Bridge Unit for review and approval. Bridge projects normally considered to be eligible for BEAP funding are those that are anticipated to be performed in 60 or less total person hours per bridge.

D. When notice to proceed is received, advise MoDOT's district contact person and local agency personnel of date of the field trip to the site. If a project is cancelled for some unforeseen reason after the notice to proceed is given, the Consultant shall immediately notify MoDOT's district contact person and the Bridge Office of this cancellation.

EXHIBIT II

E. The Consultant's services shall not be used to:

I. Prepare a complete design and plans for a replacement structure. (If the consultant recommends closing of a bridge due to its unsafe condition, the consultant may suggest several alternative structure types, but the actual design of a replacement is beyond the normal scope of BEAP.)

II. Provide condition and appraisal ratings for existing structures. (This is a duplication of the MoDOT non-state routine bridge inspection program.)

2. Inspection Phase

After receipt of a written notice to proceed from the district, the Consultant is expected to make a field inspection to collect data, verify existing data, and to discuss potential solutions with appropriate local agency personnel. In addition to structural items, the Consultant's routine review should also encompass traffic control devices, and based on bridge and approach widths, approach alignments, etc., and recommend any necessary revisions such as "Narrow Bridge" signing, object marker placements, etc.

3. Analysis Phase

The Consultant shall provide a structural analysis where structural recommendations are being made that are in accordance with MoDOT's load rating policies included in the current edition of the Bridge Inspection Rating Manual, the AASHTO Manual for Condition Evaluation of Bridges, and AASHTO's Standard Specifications for Highway Bridges. In cases of conflict, MoDOT's Bridge Inspection Rating Manual shall prevail.

4. Reporting Phase

A. The Consultant shall simultaneously submit a one to two page cover letter including a sketch of the recommendation to the local agency, MoDOT district office, and MoDOT Bridge Unit. These documents shall be signed and sealed by the Consultant.

B. If a repair or retrofit is being recommended, which affects the load capacity of the bridge, the Consultant shall include a copy of the load rating calculations for the Inventory and Operating Ratings as well as the load posting ratings in accordance with the latest edition of the Bridge Inspection Rating Manual. Also, completion of a "Structure Inventory and Appraisal Data Sheet" is required for data that will change due to the recommendation. If the structure is located in a "commercial zone," additional rating calculations shall be provided for the Mo5 rating vehicle.

C. Within forty-five days after completion of each project, the Consultant shall submit an invoice for the actual cost and hours per individual project.